DETAILED ACTION

1.   This is a Supplemental Office Action to replace the previous one issued on 4/1/2008.

2.   Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Drawings

3.   The drawings were received on 12/26/2007. These drawings are accepted.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   Claims 4, 16, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted step is in between the steps of "converting" and "comparing"/"displaying" (i.e., the step of "comparing" does not use the resulted device independent color space for comparison or display).

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described
as set forth in section 102 of this title, if the differences between the subject matter sought to
be patented and the prior art are such that the subject matter as a whole would have been
obvious at the time the invention was made to a person having ordinary skill in the art to which
said subject matter pertains. Patentability shall not be negatived by the manner in which the
invention was made.

7.   Claims 4, 16, and 26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Suzuki et al. (U.S. Patent 6,819,790) in view of Kumada et al.

(U.S. Patent No. 7,035,454).

Regarding claim 4, Suzuki discloses:

- acquiring a subject color medial image in a device dependent color

space (Fig. 1(a) shows sub-regions of medical image 104 are acquired by

MTANN 100);

- comparing a subject color medical image to normal color medical image

data (Fig. 1(a): step 110 comparing the pixels of the subject color medical image

(i.e., the MTANN's likelihood distribution map 108 to the pixels of normal color

medical image data (i.e., the teacher likelihood distribution map 106) ;

- identifying abnormal pixels from the subject color medical image (Fig.

1(a): error calculation unit 112 and col. 15, lines 9-13: determining whether a

certain pixel belongs to a class such as normal or abnormal).

Suzuki does not disclose expressly converting the device dependent color

space to a device independent color space.

Kumada discloses converting the device dependent color space to a

device independent color space using input color to Lab converter 101 (Fig. 1).

Suzuki & Kumada are combinable because they are from color image

processing method.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to convert the device dependent color space to a device independent color space in Suzuki as taught by Kumada.

The suggestion/motivation for doing so would have been to allow precise color reproduction and to manage the generation history of the generated profile (Kumada, col. 1, lines 32-36).

Therefore, it would have been obvious to combine Suzuki with Kumada to obtain the invention as specified in claim 4.

Regarding claim 16, Suzuki discloses:

- acquiring a subject color medial image in a device dependent color space (Fig. 1(a) shows sub-regions of medical image 104 is acquired by MTANN 100);

- displaying the subject color medical image (col. 16, lines 29-31);

- comparing a subject color medical image to normal color medical image data (Fig. 1(a): step 110 comparing the pixels of the subject color medical image (i.e., the MTANN's likelihood distribution map 108 to the pixels of normal color medical image data (i.e., the teacher likelihood distribution map 106) to identify abnormal pixels from the subject color medical image (Fig. 1(a): error calculation unit 112 and col. 15, lines 9-13: determining whether a certain pixel belongs to a class such as normal or abnormal);

- highlighting abnormal pixels on the displayed subject color medical image (col. 16, lines 29-31: displaying a nodule at a center).

Suzuki does not disclose expressly converting the device dependent color space to a device independent color space.

Kumada discloses converting the device dependent color space to a device independent color space using input color to Lab converter 101 (Fig. 1).

Suzuki & Kumada are combinable because they are from color image processing method.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to convert the device dependent color space to a device independent color space in Suzuki as taught by Kumada.

The suggestion/motivation for doing so would have been to allow precise color reproduction and to manage the generation history of the generated profile (Kumada, col. 1, lines 32-36).

Therefore, it would have been obvious to combine Suzuki with Kumada to obtain the invention as specified in claim 16.

Regarding claim 26, Suzuki discloses:

- acquiring a subject color medial image in a device dependent color space (Fig. 1(a) shows sub-regions of medical image 104 is acquired by MTANN 100) using an endoscope (as shown in Figs. 14(a) and 14(b));

- displaying a region of interest from the subject color medical image (col. 16, lines 29-36: displaying a local window Rs);

- comparing the region of interest to normal color medical image data (Fig. 1(a): comparing the local window of the medical image 108 to normal color medical image 106) to identify abnormal pixels from the region of interest (Fig.

1(a): error calculation unit 112 and col. 15, lines 9-13: determining whether a

certain pixel belongs to a class such as normal or abnormal);

- highlighting abnormal pixels on the displayed region of interest (col. 16,

lines 29-31: displaying a nodule at a center of the local window).

Suzuki does not disclose expressly converting the device dependent color

space to a device independent color space.

Kumada discloses converting the device dependent color space to a

device independent color space using input color to Lab converter 101 (Fig. 1).

Suzuki & Kumada are combinable because they are from color image

processing method.

At the time of the invention, it would have been obvious to a person of

ordinary skill in the art to convert the device dependent color space to a device

independent color space in Suzuki as taught by Kumada.

The suggestion/motivation for doing so would have been to allow precise

color reproduction and to manage the generation history of the generated profile

(Kumada, col. 1, lines 32-36).

Therefore, it would have been obvious to combine Suzuki with Kumada to

obtain the invention as specified in claim 26.

Allowable Subject Matter

8.   Claims 10, 17, and 27 are allowed.

9.   The following is a statement of reasons for the indication of allowable

subject matter:

Regarding claims 10, 17, and 27, the prior art, taken either singly or in

combination, does not teach:

- displaying the subject color medical image and highlighting areas of the

subject color medical image that have a saturation that is greater than normal.

Contact Information

Any inquiry concerning this communication or earlier communications from

the examiner should be directed to ANH H. DO whose telephone number is 571-

272-7433. The examiner can normally be reached on 5/4-9.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, EILEEN LILLIS can be reached on 571-272-6928. The

fax phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public

PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free).

June 2, 2008

/ANH H DO/

Primary Examiner, Art Unit 2624